

**ABSTRACT**

An electronic endoscope apparatus including: a first endoscope having a first imaging device; and a second endoscope having a second imaging device with a different pixel density and a second drive pulse generation circuit, wherein a processor unit, which connects the two endoscopes, comprises: a first drive pulse generation circuit for driving the first imaging device, a synchronization circuit for generating a synchronizing signal synchronous with the signal of the second drive pulse generation circuit, a switching circuit for activating the synchronization circuit when the second endoscope is connected, and a signal processing circuit for processing the signals obtained by the first imaging device and for processing the signals obtained by the second imaging device based on the synchronizing signal. By this configuration, a single processor unit will suffice even when employing an imaging device with a different pixel density.